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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/823,229

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Toru Takeuchi

52433/760

4629

7590

11/16/2006

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New York, NY 10004

EXAMINER

CHAPMAN, JEANETTE E

ART UNIT

PAPER NUMBER

3635

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/823,229

Applicant(s)

TAKEUCHI ET AL.

Examiner

Chapman E. Jeanette

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8,9 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8,9 and 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 14, 16 and 18-20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claims 8, 14 and 16:

The phrase "maintaining the space at least at the region corresponding to the extended direction of the web of the split tee" lacks a clear meaning. The "space" and the "extended direction of the web" lack positive antecedents. The claims with the phrase will be considered as originally claimed until they are corrected.

For claims 18, 19 and 20:

The phrase "at least at the region corresponding to the extended direction of the web of the split tee" lacks a clear meaning. The "extended direction of the web" lacks a positive antecedent basis in the claims and the specification. The claims with the phrase will be considered as originally claimed until they are corrected.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-9 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauvoir (6059482) in view of Matsuo et al (4905436).

Beauvoir discloses a column beam join structure fabricated by

- connecting flanges 12 of upper and lower split tees 10 to a steel column 42 using bolts 50, figure 6 and
- by engaging the engaging and connecting webs 14 of the tees 10 of the ends of the flanges 52/53 of the steel beam 40 using bolts (column 6, lines 25-30) or
- by engaging and connecting the upper and lower flanges 52/53 of a steel beam 40 between the webs 14 of the upper and lower split tees using bolts
- the upper limit of the yield stress of 50ksi of the steel material used for either one or both web and flange of the slit tee 10 is defined not to be more than the lower limit of 36ksi thereof; see column 5, lines 1-7
- at a portion where both ends of the flange of the split tee are connected to the steel column using bolts
- both the upper and lower split tee has a shape wherein the cross section area of the flange is partially reduced; see figure 3

Beauvoir lacks the space keeping members are inserted between the flange of the split tee and the steel column and the flange of the split tee and the steel column are connected in the state of maintaining space. Matsuo et al discloses a steel column and

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a split tee 32 with a connecting flange 3 to a steel column 1. Matsuo et al discloses space keeping members 9 are inserted between the flange of the split tee 32 and the steel column 1. Matsuo also discloses connecting a pair of flanges of upper and lower tees to a steel column using bolts 4 and 5 and by molding concrete slab 14 to both the upper and lower flanges of the steel beam 2. See figures 15 and 16. Hence, in modifying Beauvoir in view of Matsuo, the yield stress of the steel material used for the flange of the split tee, to which the flange(upper) of the concrete slab has been molded and connected is higher than the upper limit of the yield stress of the steel material used for the flange of the other, lower split tee. Further, it would have been obvious to one of ordinary skill in the art to modify Beauvoir to include the space members 9 and concrete to reinforce and strengthen the beam to column structure as shown by Matsuo et al..

### ***Response to Arguments***

Applicant's arguments with respect to claims 8-9 and 14-20 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments are based on the amendment adding the text indicated above in the 112 rejection. This newly added text has not been considered until the antecedent basis rejection or 35 USC 112 rejection has been clarified.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chapman E Jeanette whose telephone number is 571-272-6841. The examiner can normally be reached on Mon.-Fri, 8:30-6:00, every other fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Naoko Slack can be reached on 571-272-6848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JEANETTE CHAPMAN  
PRIMARY PATENT EXAMINER  
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jec